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RC 831

Reference Manual

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Matrix Printer, KSR

Abstract:

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CONTENTS PAGE

1. TERMINAL SPECIFICATION 1.

1.1 General Technical Data 1.1

Printing speed:	30 or 10 cps. Catch up speed 47 cps when emptying buffer.
Printing mode:	Left to right.
Throughput:	True 300 or 110 bps.
Printing characteristics:	132 characters per line 6 lines per inch 13 characters per inch
Line spacing:	4.2 mm
Character style:	7 x 9 dot matrix. A character can use a coloumn 7 dot of 9 dots vertically and up to 7 dots horizontally.
Matrix height:	3.2 mm.
Useable matrix height:	2.5 mm.
Character set:	96 char ASCII or optionally 96 char Danish.
Control characters:	Cf. section 3.
Paper end:	Sensed by switch
Acoustic alarm:	On receipt of bell and 7 spaces ahead of and at right hand margin.

Input buffer:	64 chars. from line 8 chars. from keyboard.
Printhead life:	100 million characters.
Duty cycle:	100%.

1.2 Paper and Ribbon Data

1.2

Type of paper:	Continuous fanfolded edge-punched.
Sprocket holes:	Cf. section 7 for recommendations
Paper width:	12 " = 305 mm.
Number of copies:	2 copies.
Paper weights:	Cf. section 8 for recommendations.
Format height:	8½ " = 216 mm or 12" = 305 mm.
Ribbon quality:	Special matrix printer nylon.
Ribbon colour:	Black.
Ribbon:	Cartridge loaded print-ribbon, continously inked.
Ribbon life:	5 million characters.

1.3 Standard Accessories

1.3

Ribbon:	PN 6-6001, black.
Paper deflector:	1 pcs.

Mains fuse 1 amp. (220V):	1 pcs.
Fanfolded paper, 12 " x 8½ ":	100 pcs. 6-6000.

1.4 Power Supply Data

Mains voltage:	220VAC. ± 10%
Mains frequency:	48 - 60 Hz
Power consumption:	75 W.
Power cord:	Included.

1.5 Dimensions and Weight

Width:	45 cm.
Height:	14 cm.
Depth:	54 cm.
Weight:	15 kg.

1.6 Environment

Storage temperature:	-40°C - 60°C.
Operating temperature:	+5°C - +40°C.
Storage and operating humidity:	2 - 90% RH, no condensation

Noise levels:	Idling - 0 dB.
	Printing - 65 dB (A).
	Measured 1 m in front of the printer, when printing normal text.

1.7 Options 1.7

Optional interface:	20 mA current loop.
Optional character sets:	Cf. section 3.

2. SERIAL INTERFACE SPECIFICATION 2.

2.1 Standard 2.1

Communication interface:	Serial according to C.C.I.T.T. V24 recom. and EIA RS 232-C.
Buffer size:	64 characters.
Interface connector:	Cf. section 9 for pin designation.
	Cannon DB-25 P mounted on the backside of terminal.
Character format:	1 startbit, 7 databits, 1 parity bit (even parity) and 1 stopbit.
Transmission speed:	110/300 bps. Switch selectable.
Communication format:	Character by character.
Communication connection:	Full duplex via modems, current loop converters, or local connection.

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3. CHARACTER REPERTOIRE 3.

The RC 831 matrix printer has as standard a 96 char ASCII repertoire which covers most of the normal printer applications (see table 3.1).

Optionally the RC 831 can be supplied with 96 char Danish alphabet shown in table 3.2.

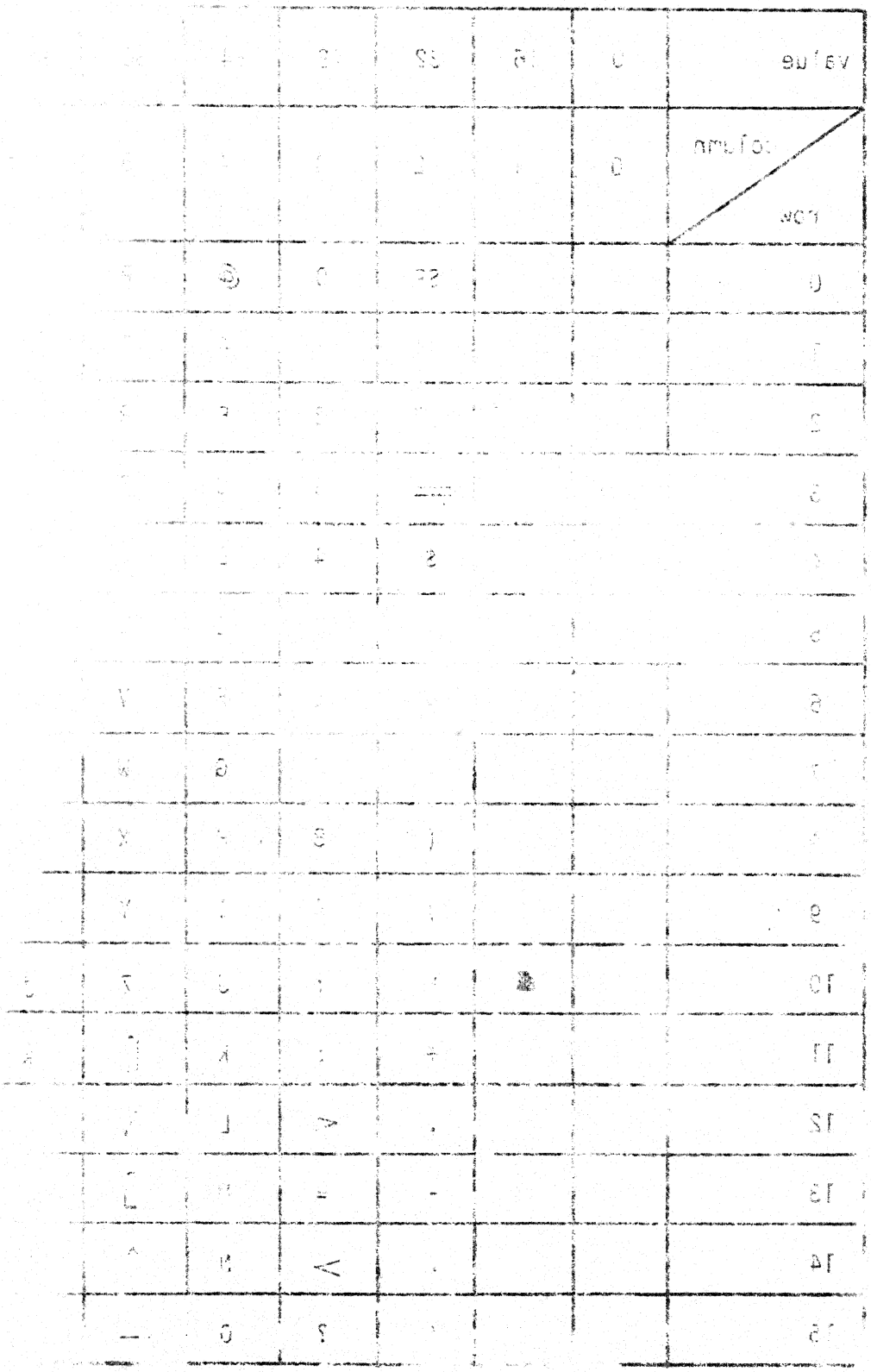
3.1 Control Code Table 3.1

Table 3.3 shows the control character set.

ASCII

value	0	16	32	48	64	80	96	112
column / row	0	1	2	3	4	5	6	7
0			SP	0	@	P	`	p
1			!	1	A	Q	a	q
2			"	2	B	R	b	r
3			#	3	C	S	c	s
4			$	4	D	T	d	t
5			%	5	E	U	e	u
6			&	6	F	V	f	v
7			'	7	G	W	g	w
8			(	8	H	X	h	x
9			)	9	I	Y	i	y
10		■	*	:	J	Z	j	z
11			+	;	K	[	k	{
12			,	<	L	\	l	¦
13			-	=	M	]	m	}
14			.	>	N	^	n	~
15			/	?	O	—	o	DEL

Table 3.1, ASCII.



DANISH

value	0	16	32	48	64	80	96	112
column / row	0	1	2	3	4	5	6	7
0			SP	0	@	P	`	p
1			!	1	A	Q	a	q
2			"	2	B	R	b	r
3			#	3	C	S	c	s
4			$	4	D	T	d	t
5			%	5	E	U	e	u
6			&	6	F	V	f	v
7			'	7	G	W	g	w
8			(	8	H	X	h	x
9			)	9	I	Y	i	y
10		■	*	:	J	Z	j	z
11			+	;	K	Æ	k	æ
12			,	<	L	Ø	l	ø
13			-	=	M	Å	m	å
14			.	>	N	^	n	~
15			/	?	O	—	o	DEL

Table 3.2, Danish.

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DESIGNATION	OCTAL VALUE	ABBREVIATION	DESCRIPTION
BEL	07_8	Bell	Bell
LF	12_8	Line Feed	Feeds the paper one line
CR	15_8	Carriage Return	Causes carriage to return to the preset left margin
ESC]		Horizontal Tab set, left	Sets the left tab stop at the present carriage pos.
ESCr		Horizontal Tab Set, right	- - right - - - - - - - -
ESCx		Horizontal Tabs Clear	Clears both horizontal tab stops
ESCw		Tabs Override	Overrides either tab stop when carriage is pos. at it
SUB	32_8	Sub	Prints ■ , this character is also printed if parity error occurs.
SP	40_8	Space	Causes spacing
DEL	177_8	Delete	Causes no print. Can be used as dummy character

Table 3.3. RC 831 Control Code Table.

4. PRINTSTRATEGY AND THROUGHPUT 4.

4.1 Printstrategy 4.1

With regard to printstrategy the RC 831 is strictly sequential, and it means that the central processor unit of the printer will execute one character or function at a time.

Printing is carried out as follows:
Data arriving from the interface are stored in a buffer memory with a capacity of 64 characters. During reception delete characters (177 octal) and unused control characters (cf. table 3.4) are screened away and will not be stored in the buffer memory. When printing,the buffer memory is then emptied, character by character.

4.2 Throughput 4.2

All time consuming control functions, i.e. carriage return and line feed, cause that the buffer will be filled more or less. No control functions can, however, cause loss of data.

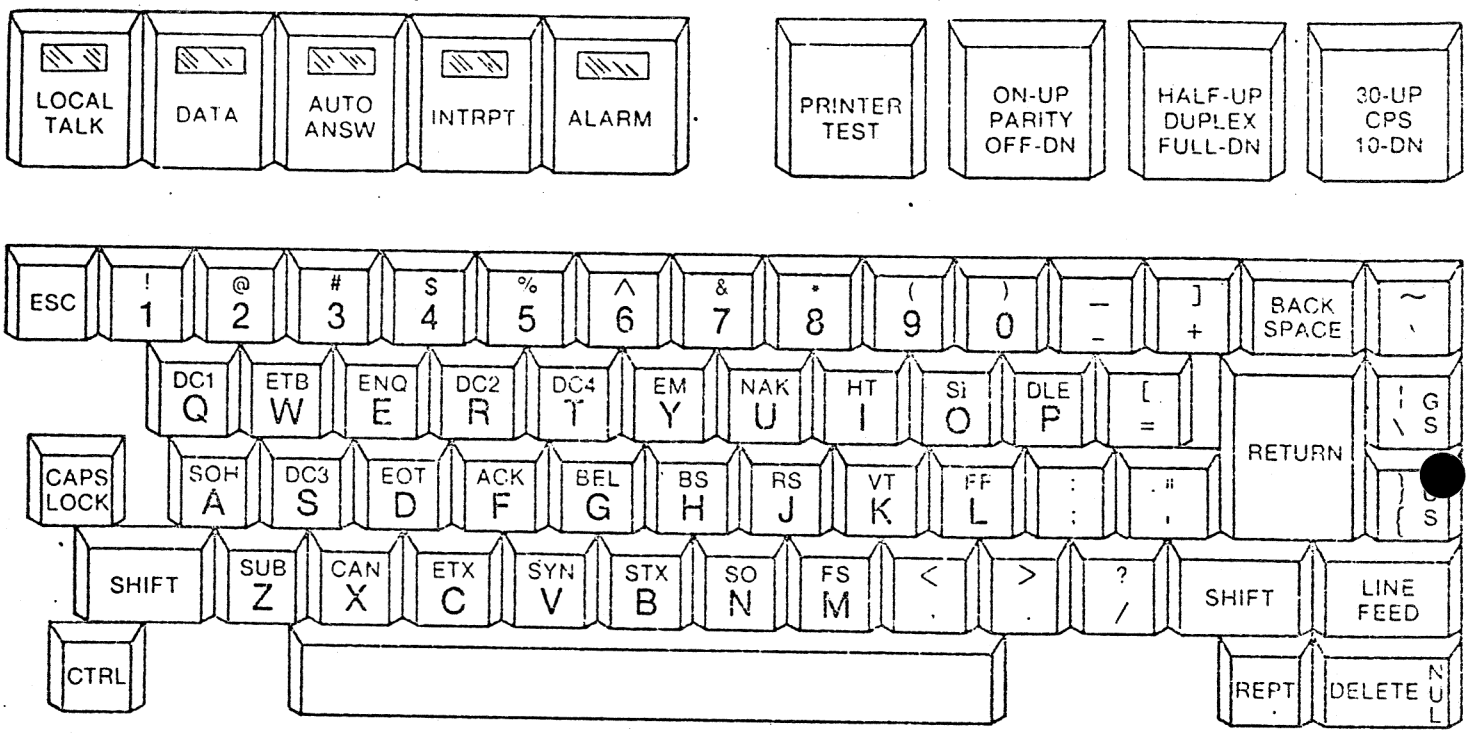
The result is that RC 831 is a true 300 bps printer.

The keyboard is also buffered (8 characters) so no loss of data input can occur either.

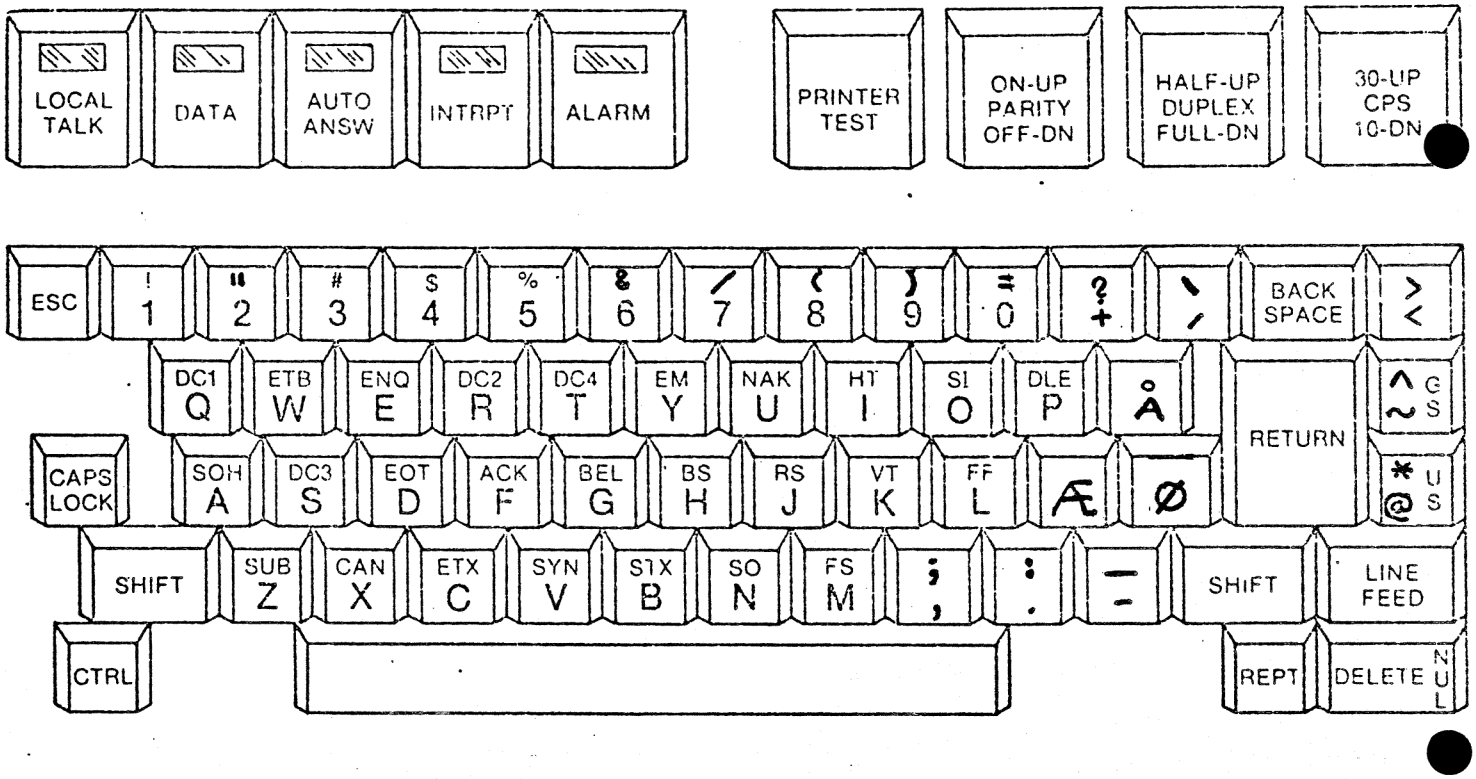
5. END OF PAPER INDICATION 5.

The EOP-switch is activated when the paper is away from the switch which happens ~13 lines from the subject print line. After the switch is activated printing can continue. The visual alarm is immediately lit. If the terminal is put in local mode the data-mode cannot be entered prior to insertion of new paper.

ITT 3343 Terminal



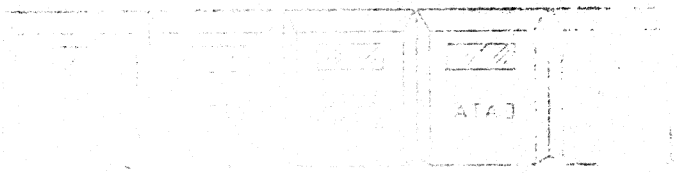
ASCII Standard tastatur.

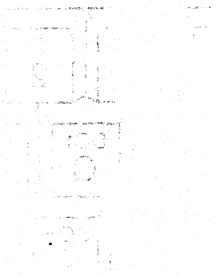


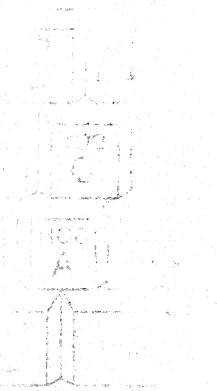
ASCII Standard tsatatur med danske tegn.

6. KEYBOARD LAYOUTS

6.







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7. PAPER AND RIBBON HANDLING 7.

For detailed information cf. RC 831 Operating Guide.

7.1 Recommended Paper Weights 7.1

PAPER	MAX. WEIGHT AND THICKNESS	CARBON
1-part paper	60 g/m^2 , 0.1 mm thick	25 - 30 g/m^2
2-part paper	60 g/m^2 , 0.2 mm thick	25 - 30 g/m^2
3-part paper	60 g/m^2 , 0.3 mm thick	25 - 30 g/m^2

NOTE:
The paper shall be paper specifically designated to (TTY mod 43) RC 831. Mainly with respect to sprocket holes and paper width.

7.2 Paper Adjustments 7.2

It is important to notice that the printer needs no paper adjustments.

7.3 Ribbon 7.3

Caution - use only ribbon recommended by A/S REGNECENTRALEN
HOVEDVEJEN 9
DK-2600 GLOSTRUP

Ask for ... ... pn 6-6001 black ribbon

8. SELF TEST FEATURE RC 831 8.

The self test feature of RC 831 provides a quick and convenient method of checking the printer.

8.1 Design 8.1

The self test is part of the internal CPU program and provides a print-out, thereby checking most of the printer functions.

8.2 Operation 8.2

Activate the printer test key.

8.3 What is checked 8.3

1. Left hand margin stop.
   Setting and function of the left hand margin set is tested.

2. Normal text.
   Complete character repertoire is printed.

3. Right hand margin stop.
   Setting and function of the right hand margin set is tested. Automatic CR at right hand margin is performed. If less than 96 char pos. between stops a char is dropped each time a new line starts.

PRINT SAMPLE

9. INTERFACE CONNECTOR SPECIFICATION AND APPLICATIONS 9.

A standard 25 pin C.C.I.T.T. V.24 (RS 232C) male connector (Cannon DB-25) is mounted on the backside of the terminal.

9.1 Interface Connector Signals V24 9.1

DB 25 p PIN NO.	MODEM SIGNAL	CCITT V24 / RS 232C
1	Chassis	101/AA
2	Transmitted data	103/BA
3	Received data	104/BB
5	Clear to send	105/CA
6	Data set ready	106/CB
7	Signal Ground	102/AB
8	Carrier Detected	109/CF
20	Data Terminal ready	108/2/CD

NOTE 1:
No other pins may be used for V24 connections.

NOTE 2:
To permit entry into data mode pins 5, 6, and 8 must be high.

9.2 Interface Connector Signals, Internal Current Loop 9.2

DB 25 p PIN NO.	NAME
14	XMIT loop +
13	XMIT loop -
16	REC loop +
15	REC loop -

Three applications are supported:

- local connection
- current loop connection
- modem connection

NOTE 1:
In order to permit operation pins 3, 5, 6, and 8 must be high.

NOTE 2:
No other pins may be used for current loop operation.

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RETURN LETTER

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